

Appln No. 10/004,046
Amdt date October 3, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Cancel claims 257, 264, 275, 277, 286 and amend claims 256, 258-259, 265-274, 276, 281-285, 289-293 and add new claims 294-319.

256. (Amended) An audiovisual editing and video format conversion method, comprising:

receiving video information and audio information;

converting the video information and the audio information to a digital production format having a frame rate of substantially 24 fps and an image dimension in pixels, when the video information is not received in such a format;

storing the video information and the audio information in the digital production format on a randomly-accessible, high capacity storage medium;

performing non-linear editing on the video information and the audio information in their digital production format to create a digital edited version of the video information and the audio information, the digital edited version having a frame rate of substantially 24 fps and an image dimension in pixels in vertical and horizontal directions;

converting the digital edited version of the video information and the audio information to an output signal having a predetermined display format having a frame rate that is greater than or equal to 24 fps and an image dimension in pixels that is greater than the image dimension in pixels in the horizontal and/or vertical direction of the video information in its digital edited format; and

displaying the output signal in its predetermined display format on a display device.

257. (Canceled)

258. (Amended) The method of claim 256, wherein the source of the received video information is film having a frame rate of 24 frames per second.

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259. (Amended) The system of claim 256, wherein the video information in its digital production format embodies a component format.

264. (Canceled)

265. (Amended) The method of claim 256, whrcin the predetermined display format has an image dimension in pixcls of 1920 x 1080.

266. (Amended) The method of claim 256, wherein the step of converting the digital edited version of the video information to an output signal having a predetermined display format includes performing a 3:2 pull-down operation on the editcd version of the video information.

267. (Amended) The method of claim 256, wherein the step of converting the digital edited version of the video information to an output signal having a predetermined display format is implecmnted in a graphics processor which is incorporated into a general purpose computer.

268. (Amended) The method of claim 256, wherein the digital edited version of the video information has an image aspect ratio and wherein the step of converting the digital edited version of the video information to an output signal having a predetermined display format includcs changing the image aspect ratio of the edited version of the video information.

269. (Amended) The method of claim 256, wherein the step of converting the digital edited version of the video information to an output signal having a predetermined display format includes preserving the image aspect ratio of the digital edited version of the video while performing a non-lincar transformation.

270. (Amended) The method of claim 256, whrcin the step of converting the digital edited version of the video information to an output signal having a predetermincd display format includes altering the image aspect ratio of the video information by cropping.

271. (Amended) The method of claim 256, whrcin thc step of converting the digital edited version of the video information to an output signal having a predetermined display

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format includes changing the image aspect ratio of the video information by changing the vision center of the image by panning and/or scanning.

272. (Amended) The method of claim 256, further including adding production effects to the video information in its digital production format.

273. (Amended) The method of claim 256, further including adding special effects to the video information in its digital production format.

274. (Amended) The method of claim 256, further including adding additional video information to the video information in its digital production format, wherein the additional video information has the same digital format as the video information in its digital production format.

275. (Canceled)

276. (Amended) A system for capturing, recording, and converting the format of digital video information, comprising:

a video camera for capturing digital video information at a frame rate of substantially 24 frames per second;

a digital video recorder for recording the digital video information onto a randomly-accessible, high-capacity storage medium in a digital production format having a frame rate of substantially 24 fps and an image dimension in pixels in vertical and horizontal directions;

a graphics processor for converting the video information in the digital production format to an output signal having a predetermined display format having a frame rate that is greater than or equal to 24 frames per second and an image dimension in pixels that is greater than the image dimension in pixels in the horizontal and/or vertical direction of the video information in its digital production format; and

a display device for displaying the video information in its predetermined display format.

277. (Canceled)

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281. (Amended) The system of claim 276, wherein the video information in the digital production format has an image aspect ratio and wherein the graphics processor further changes the image aspect ratio of the video information

282. (Amended) The system of claim 281, wherein the graphics processor changes the image aspect ratio of the video information by performing a non-linear transformation.

283. (Amended) The system of claim 281, wherein the graphics processor alters the image aspect ratio of the video information by cropping.

284. (Amended) The system of claim 276, wherein the predetermined display format has an image dimension of 1920 x 1080 pixels.

285. (Amended) A method of capturing, recording, and converting the format of digital video information, comprising:

capturing digital video information at a frame rate of substantially 24 frames per second;
recording the digital video information onto a randomly-accessible, high-capacity storage medium in a digital production format having a frame rate of substantially 24 frames per second and an image dimension in pixels in vertical and horizontal directions;

converting the video information in its digital production format to an output signal having a predetermined display format having a frame rate that is greater than or equal to 24 fps and an image dimension in pixels that is greater than the image dimension in pixels in the horizontal and/or vertical direction of the video information in its digital edited format; and
displaying the output signal in its predetermined display format on a display device.

286. (Canceled)

289. (Amended) The method of claim 285, wherein the video information is recorded using a digital recorder and wherein the digital recorder is an optical disc drive.

290. (Amended) The method of claim 285, wherein the video information in its production format has an image aspect ratio and wherein the step of converting the digital edited version of the video information to a predetermined video display format includes changing the image aspect ratio of the digital edited version of the video information.

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291. (Amended) The method of claim 290, wherein the step of converting the digital edited version of the video information to a predetermined video display format includes changing the image aspect ratio of the video information by performing a non-linear transformation.

292. (Amended) The method of claim 290, wherein the step of converting the digital edited version of the video information to a predetermined video display format includes altering the image aspect ratio of the video information by cropping.

293. (Amended) The method of claim 285, wherein the predetermined video display format has an image dimension of 1920 x 1080 pixels.

294. (New) The method of claim 256, wherein the predetermined video display format has an image dimension in pixels of 1280 x 720.

295. (New) The method of claim 256, wherein the image dimension in pixels of the video information in its digital production format is 1280 x 720.

296. (New) The method of claim 256, wherein the digital edited version of the video information comprises a compressed digital video format, wherein the digital audio information comprises a compressed digital audio format, and wherein the compressed video information comprises a video data stream and the audio data is interleaved within the video data stream.

297. (New) The method of claim 256, wherein the predetermined display format embodies an HDTV format.

298. (New) The method of claim 256, wherein the digital edited version of the video information includes pixels having a non-square pixel aspect ratio.

299. (New) The method of claim 256, wherein the digital edited version of the video information includes pixels having a square pixel aspect ratio.

300. (New) The method of claim 256, further including selecting the display format from a plurality of different display formats.

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301. (New) The method of claim 300, wherein each of the plurality of display formats has an image dimension in pixels and wherein at least two of the different display formats have different image dimensions.

302. (New) The method of claim 300, wherein each of the plurality of display formats has an aspect ratio and wherein at least two of the different display formats have different aspect ratios.

303. (New) The method of claim 300, wherein each of the plurality of display formats has a frame rate and wherein at least two of the different display formats have different frame rates.

304. (New) The method of claim 285, further including selecting the display format from a plurality of different display formats.

305. (New) The method of claim 304, wherein each of the plurality of display formats has an image dimension in pixels and wherein at least two of the different display formats have different image dimensions.

306. (New) The method of claim 304, wherein each of the plurality of display formats has an aspect ratio and wherein at least two of the different display formats have different aspect ratios.

307. (New) The method of claim 304, wherein each of the plurality of display formats has a frame rate and wherein at least two of the different display formats have different frame rates.

308. (New) The system of claim 276, wherein the image dimension in pixels of the video information in its digital production format is 1280 x 720.

309. (New) The method of claim 285, wherein the image dimension in pixels of the video information in its digital production format is 1280 x 720.

310. (New) The system of claim 276, wherein the video camera also captures audio information.

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311. (New) The method of claim 256, wherein the predetermined display format embodies a widescreen format.

312. (New) An audiovisual editing method, comprising:
receiving video information and audio information;
converting the video information and the audio information to a digital production
format having a frame rate of substantially 24 fps and an image dimension of 1280 x 720 pixels,
when the video information is not received in such a format;
storing the video information in its digital production format and the audio information in
a digital format on a randomly-accessible, high capacity storage medium;
performing non-linear editing on the video information in its digital production format to
create an a digital edited version of the video information, the digital edited version having a
frame rate of substantially 24 fps and an image dimension in pixels.

313. (New) The method of claim 312, wherein the video and audio information are
received by an interface to a high-bandwidth data network.

314. (New) The method of claim 312, wherein the video and audio information are
received by a satellite receiver.

315. (New) The method of claim 312, wherein the video and audio information are
received by a broadcast signal receiver.

316. (New) The system of claim 276, wherein the digital video information captured
by the video camera has an RGB format, the system further including:
three low-pass filters, one associated with each of the R, G, and B components of the
RGB video signal, to remove all frequency components above a specified frequency;
an RGB-to-Y matrix circuit connected to receive each of the R, G, and B components, the
RGB-to-Y matrix circuit being operative to combine the signals in predetermined proportions
and produce a single luminance signal, Y;
a high-pass filter connected to the output of the RGB-to-Y matrix circuit to filter the Y
signal to remove all frequency components below a specified frequency;

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a Y-to-RGB matrix circuit connected to the output of the high-pass filter, the Y-to-RGB matrix circuit being operative to separate the high-pass-filtered Y signal into R', G' and B' components in the same proportion as previously combined by the RGB-to-Y matrix circuit; and

three mixers, each adapted to receive an R/R', G/G' and B/B' pair, respectively, each mixer being operative to mix the signals of its respective input pairs and generate R'', G'' and B'' signals having full luminance bandwidth and reduced chrominance bandwidth.

317. (New) An audiovisual system, comprising:
an input to receive digital audio and video information;
graphics processor to convert the video information to a production format comprising an RGB video signal when the video information is not received in such a format;
three low-pass filters, one associated with each of the R, G, and B components of the RGB video signal, to remove all frequency components above a specified frequency;
an RGB-to-Y matrix circuit connected to receive each of the R, G, and B components, the RGB-to-Y matrix circuit being operative to combine the signals in predetermined proportions and produce a single luminance signal, Y;
a high-pass filter connected to the output of the RGB-to-Y matrix circuit to filter the Y signal to remove all frequency components below a specified frequency;
a Y-to-RGB matrix circuit connected to the output of the high-pass filter, the Y-to-RGB matrix circuit being operative to separate the high-pass-filtered Y signal into R', G' and B' components in the same proportion as previously combined by the RGB-to-Y matrix circuit;
three mixers, each adapted to receive an R/R', G/G' and B/B' pair, respectively, each mixer being operative to mix the signals of its respective input pairs and generate R'', G'' and B'' signals having full luminance bandwidth and reduced chrominance bandwidth;
a graphics processor to convert the R'', G'', and B'' signals into a video information in a digital production format;
a randomly-accessible, high-capacity storage medium to store the video information in the digital production format.

318. (New) The system of claim 317 further including a graphics processor for converting the video information in the digital production format to an output signal having a predetermined video display format.

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319. (New) The system of claim 318 wherein the video information in the digital production format has a frame rate of substantially 24 frames per second.